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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/666,697

09/22/2003

Judson Sloan Marte

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06/05/2006

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EXAMINER

BARRERA, RAMON M

ART UNIT

PAPER NUMBER

2832

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/666,697

Applicant(s)

MARTE ET AL.

Examiner

Ramon M. Barrera

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 5/11/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-5, 10, 11, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Sasaki, newly cited.

Sasaki discloses in Table 1 (page 13), and paragraph [0171], comparative example 13, which contains Pr comprising at least 30 weight percent of the rare earth content of the composition; Fe comprising at least 50 weight percent of the transition metal content; and the alloy contains 0.39 weight percent oxygen. From the given weight percentages the atomic percentages are calculated to be

RE<sub>14</sub>B<sub>6</sub>M<sub>76</sub>. The alloy comprises 90 weight percent of the RE<sub>2</sub>Fe<sub>14</sub>B (main) phase [0165]. The permanent magnet may be used in a motor or MRI system [0003].

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki, cited above.

Sasaki discloses the claimed invention except for its use in a generator. Sasaki did however disclose its use in a motor [0003]. It would have been obvious to one of ordinary skill at the time the invention was made to employ Sasaki's permanent magnet in a generator for the purpose of providing said device with the same high energy performance characteristics useful in motors.

5. Claims 14-19 and 21-26, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laskaris, et al. (US6518867), previously cited, in view of Sasaki, cited above. Laskaris in figs. 7-9 discloses a yoke 61 comprising a first portion 62, a second portion 63 and at least one third portion 64 connecting the first and the second portion such that an imaging volume is formed between the first and the second yoke portions; a first magnet assembly 11 attached to the first yoke portion; and a second magnet assembly 111 attached to the second yoke portion; the first permanent

magnet body having a first surface and a stepped second surface facing the imaging volume; and at least one first layer of soft magnetic material 13 located between the first yoke portion and the first surface of the first permanent magnet body; at least one second layer 113 of soft magnetic material located between the second yoke portion and the first surface of the second permanent magnet body; wherein the at least one first and one second layer of a soft magnetic material comprises a first laminate of Fe-Si or amorphous Fe or Co-base alloy layers (col 5, lines 29-47); a base section 31 having a major first surface attached to the at least one first layer of a soft magnetic material; and a hollow ring section 35 over a second surface of the base section, where the second surface of the base section is opposite to the first surface of the base section; wherein the system does not contain a pole piece or a gradient coil between the second surface of the first permanent magnet body and the imaging volume and between the imaging volume and the second surface of the second permanent magnet body (claim 49); and the system further comprises an RF coil and an image processor (fig. 7).

Laskaris also discloses a method of making an MRI device, comprising: providing a yoke comprising a first portion, a second portion and at least one third portion connecting the first and the second portions such that an imaging volume is formed between the first and the second yoke portions; attaching a first precursor body to the first yoke portion; attaching a second precursor body to the second yoke portion; magnetizing the first precursor body to form a first permanent magnet body after the step of attaching the first precursor body; and magnetizing the second precursor body to form a second permanent magnet body after the step of attaching the second precursor body (col. 2, lines 32-46); the step of magnetizing the first precursor body comprises placing a coil around the first precursor body; applying a pulsed magnetic field to the first precursor body to form at least one first permanent magnet body; and removing the

coil around the first permanent magnet body; and the step of magnetizing the second precursor body comprises placing a coil around the second precursor body; applying a pulsed magnetic field to the second precursor body to form at least one second permanent magnet body; and removing the coil from around the second permanent magnet body (col. 10 lines 10-38); wherein the first and the second precursor bodies comprise assemblies of plurality of unmagnetized rare earth - transition metal - boron alloy blocks; and the pulsed magnetic field comprises a magnetic field of at least 2.5 Tesla (col. 10, lines 54-57); further comprising: placing the plurality of unmagnetized alloy blocks on a support prior to the step of attaching the first precursor body; placing a cover over the blocks; shaping the blocks to form the first precursor body prior to removing the cover and the support; removing the cover from the first precursor body; providing an adhesive material to adhere the blocks of the first precursor body to each other; and removing the support from the first precursor body (col. 11, lines 1-35).

Laskaris did not disclose a permanent magnet made of an alloy contain greater than 0.1 but less than 0.6 weight percent oxygen. Sasaki shows that a permanent magnet employable in an MRI system having an oxygen content of .39 weight percent is an equivalent structure known in the art. Therefore, because these two permanent magnet materials were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute Sasaki's permanent magnet for Laskaris'.

Laskaris in view of Sasaki did not disclose magnetizing the precursor body at a temperature above room temperature or subjecting the permanent magnet to a recoil pulse. It would have been obvious to one having ordinary skill in the art at the time the invention was made to magnetize the precursor body at a temperature above room temperature for the purpose of increasing the magnet's saturation magnetization and to

subject the permanent magnet to a recoil pulse for the purpose of stabilizing the permanent magnet's field, since it has been held to be well known in the art to employ these methods.

6. Claims 1-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki, in view of Laskaris, both references cited above.

Sasaki did not disclose wherein RE comprises about 50 to about 90 atomic percent Pr and about 0.5 to about 5 atomic percent Ce. Sasaki discloses the desirability of substituting for Nd with Pr because of the lower cost of Pr relative to Nd and for increased magnetization and orientation of produced magnets [0020 and 0022]. Laskaris discloses a magnet wherein RE comprises greater than 50 percent Pr and an effective amount of light rare earth elements including Ce (col. 5, lines 1-6). Since Sasaki and Laskaris are both from the same field of endeavor, the purpose disclosed by Laskaris would have been recognized in the pertinent art of Sasaki. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ a magnet wherein RE comprises about 50 to about 90 atomic percent Pr and about 0.5 to about 5 atomic percent Ce for the purpose of lower cost of Pr relative to Nd and for increased magnetization and orientation of produced magnets

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225

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USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 14-17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 64 of copending Application No. 10/309146 in view of Sasaki, cited above.

This is a provisional obviousness-type double patenting rejection.

Application No. 10/309146 did not disclose the claimed permanent magnet material. Sasaki in paragraph [0003] disclosed the employment of his permanent magnet in an MRI system. It would have been obvious to one of ordinary skill at the time the invention was made to employ Sasaki's permanent magnet in Application No. 10/309146 for the purpose of providing the MRI device with high energy performance characteristics.

### ***Response to Arguments***

9. Applicant's arguments with respect to the independent claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramon M. Barrera whose telephone number is (571)

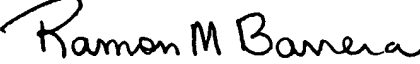


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272-1987. The examiner can normally be reached on Monday through Friday from 11 to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Ramon M Barrera  
Primary Examiner  
Art Unit 2832

rmb